

- 20 -

**Abstract**

**Use of statistical copolymers**

5

The invention relates to the use of statistical copolymers containing at least one structural unit containing hydrophobic radicals and at least one structural unit containing hydrophilic radicals as emulsifiers, in particular in the synthesis of nanoparticles, and to processes for the production of such particles in which, in a step a), an inverse emulsion comprising one or more water-soluble precursors of the nanoparticles or a melt is prepared with the aid of a statistical copolymer of at least one monomer containing hydrophobic radicals and at least one monomer containing hydrophilic radicals, and, in a step b), particles are produced.

10  
15

20

25

30